



# SISTEM KOMUNIKASI NIRKABEL TEORI

---

Mochammad Zen Samsono Hadi  
[zenhadi@pens.ac.id](mailto:zenhadi@pens.ac.id)

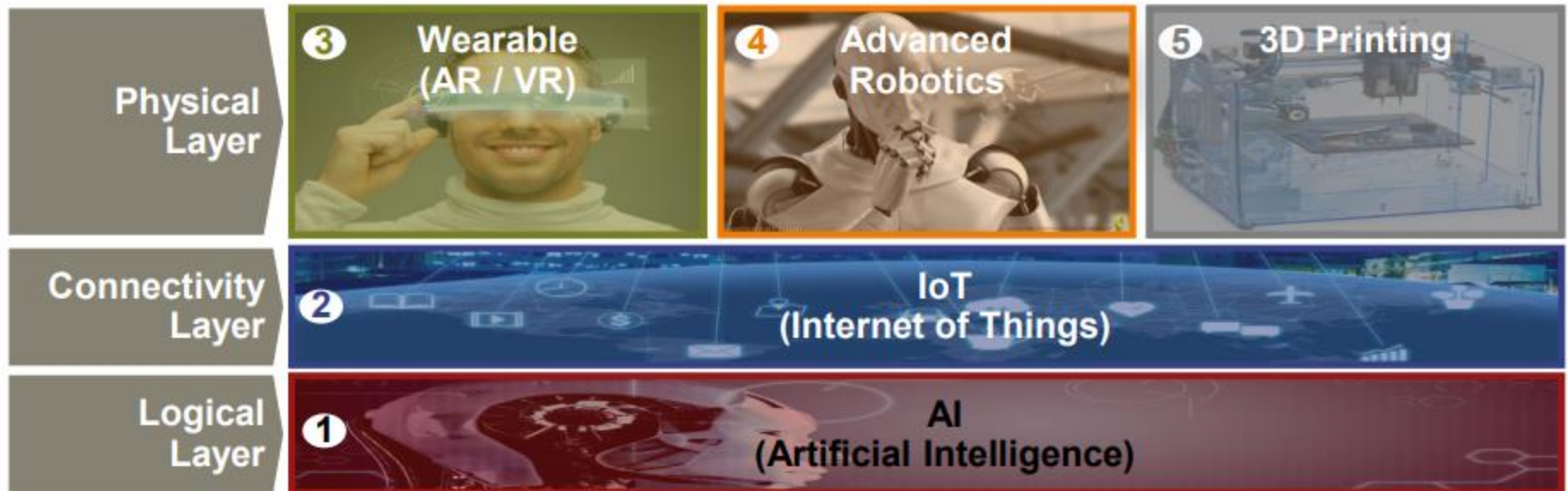
Lab. TELEPHONY  
Lt. 1 Gedung D4  
PENS

# Silabus

1. Pengenalan materi
2. Pengenalan Siskom Nirkabel
3. Evolusi Siskom Nirkabel
4. Kanal Nirkabel: LOS
5. Kanal Nirkabel: Fading
6. Teknik OFDM
7. PAPR pada sistem OFDM
8. Reduksi PAPR

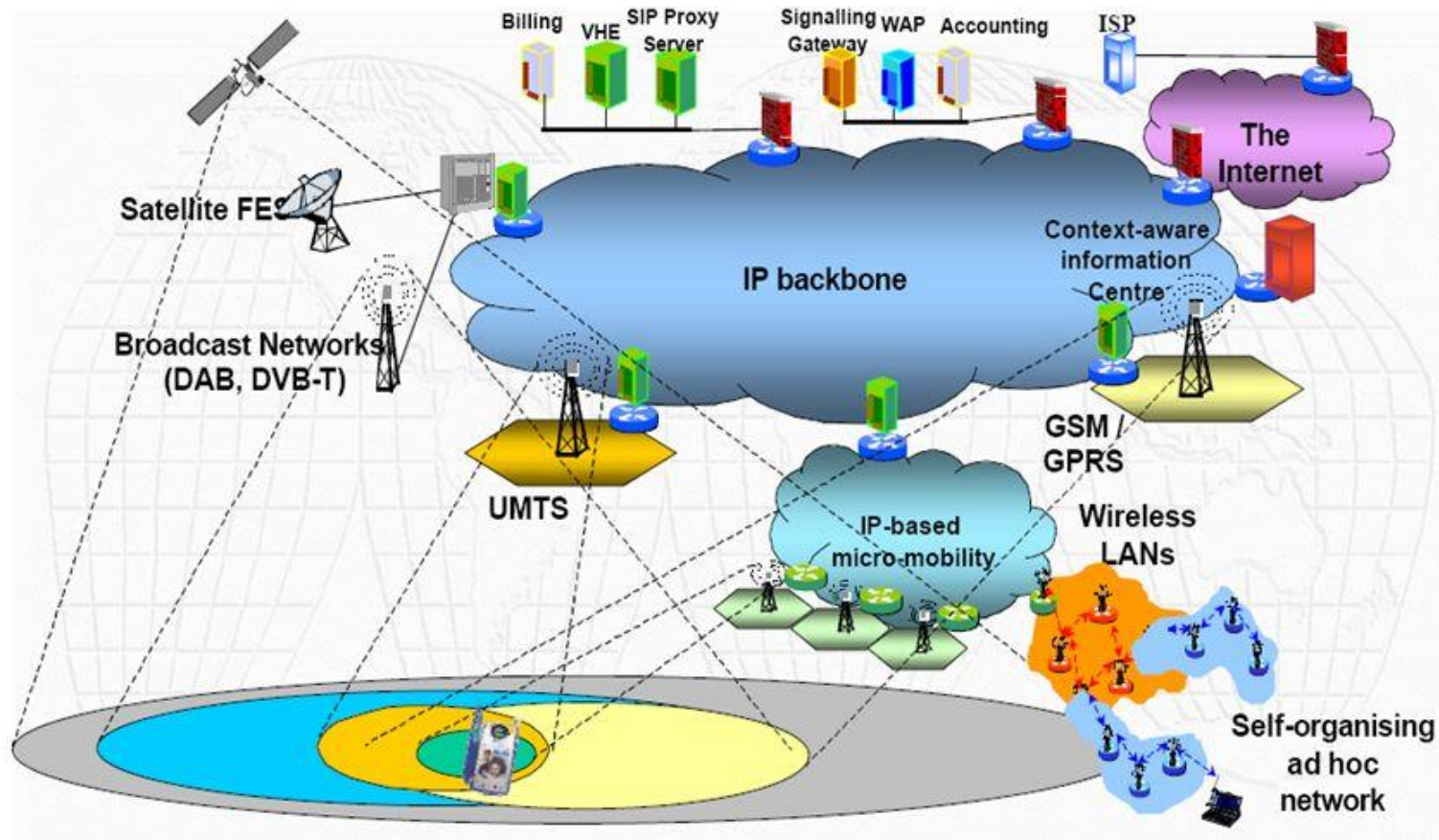
7. Sistem MIMO
8. Internet of Things
9. Wireless Sensor Networks
10. Teknologi Nirkabel: ZigBee
11. Teknologi Nirkabel: LoRa
12. Teknologi Nirkabel: BLE

## 5 Teknologi Kunci sebagai Pembangun Sistem *Industry 4.0*



Source: A.T. Kearney

# Heterogeneous Wireless Communication World



DAB: Digital Audio Broadcast  
VHE: Virtual Home Environment

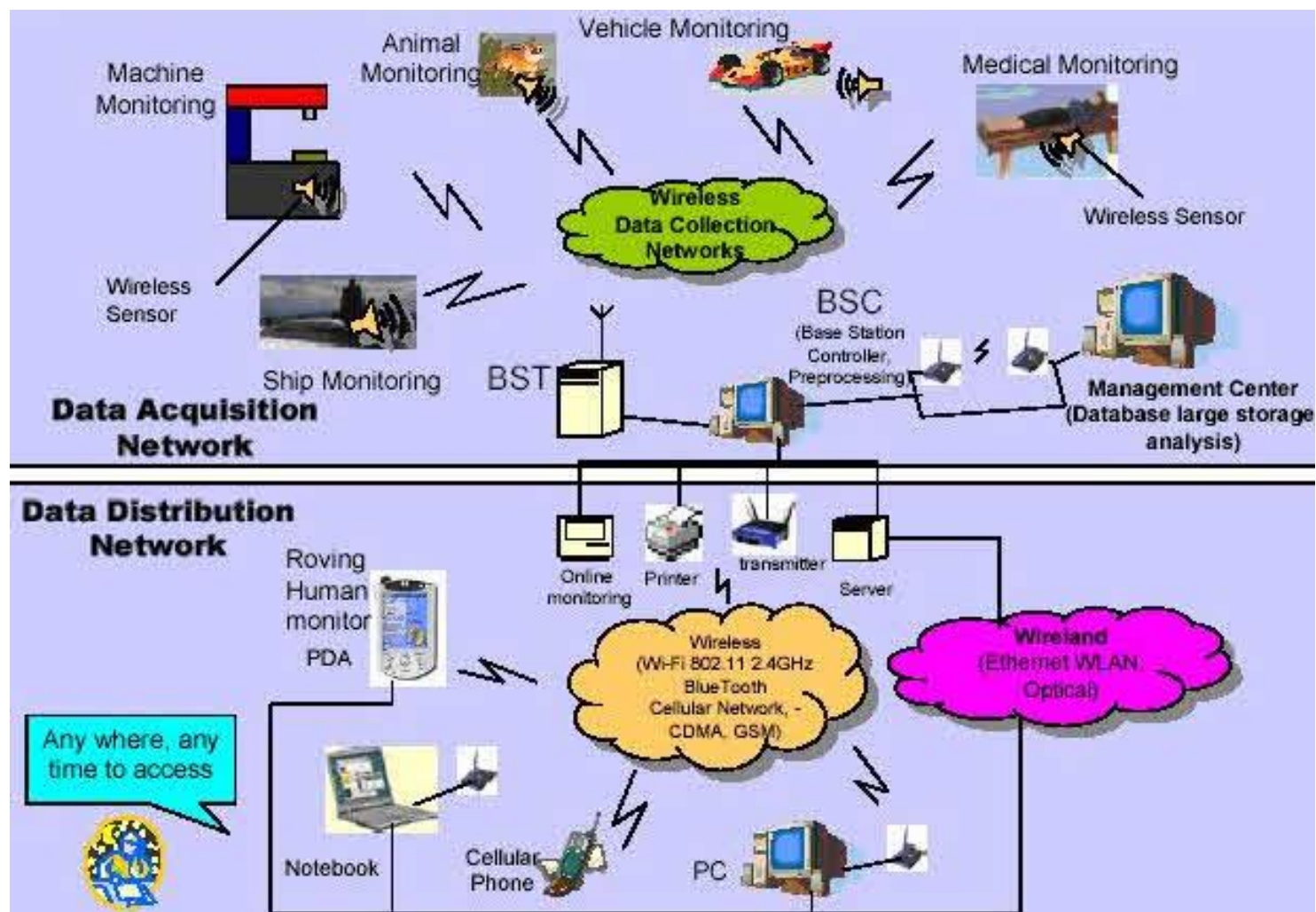
DVB-T: Digital Video Broadcast Terrestrial  
UMTS: Universal Mobile Telecommunication System

# Internet of Things (IoT)





# Sistem WSN



# Penilaian

- UTS : 30 %
- UAS : 40 %
- TUGAS : 30 %

# Referensi

- Andrea Goldsmith : "Wireless Communication", Cambridge University Press, 2005
- Rappaport, Theodore S, Wireless Communication : "Principles and Practice", Prentice Hall, 2002
- Erick D, Stefan P, Johan S " 4G LTE/LTE Advanced for Mobile Broadband", Academic Press, 2011
- David Tse, Pramod Viswanath , "Fundamentals of Wireless Communication", Cambridge University Press, 2005
- Gordon L. Stüber, "Principles of Mobile Communication 3rd", Springer, 2011